

Chapter 9. Traffic

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Environmental Setting

State Highway System

The State of California has more than 15,000 miles of state highways (e.g., interstate highways, U.S. highways, and state routes). The existing state highway system accommodates an estimated 17.3 million automobiles and 5.5 million commercial vehicles that, combined, travel over 140 billion vehicle-miles annually (California Department of Transportation 1999a). Truck volumes along the state highway system have increased proportionately to the state's overall growth, particularly on rural roadways and roadways that provide access to seaports and border crossings.

Roadway Maintenance and Funding

The California Department of Transportation (Caltrans) is responsible for maintaining the state highway system through a rehabilitation program and a maintenance program. Pavement rehabilitation improves the roadway and is designed to extend its service life an additional 10 years. Maintenance activities keep the roadway safe and serviceable until rehabilitation is needed. Pavement maintenance activities include: routine maintenance (day-to-day maintenance of roadway), major maintenance (planned work that is generally done under contract) and preventive maintenance (treatments applied when pavement distress is minimal to extend its period of usefulness). Roadway maintenance is primarily funded through the state's tax on the sale of gasoline.

As described above, the California state highway system comprise over 15,000 center-line miles of highway, with over 49,000 lane miles of pavement. Currently, 14,000 lane miles of highway pavement require corrective maintenance or rehabilitation, which amount to nearly 30% of the state highway system (California Department of Transportation 1999b).

Local Roadway System

The local roadway system comprises roads that are under the jurisdiction of a particular city or county public works department. Local roads provide access to adjacent parcels and also provide a route for traffic from the urbanized areas of the county onto the state highway system.

The primary source of funding for roadway maintenance is also through the state's tax on the sale of gasoline; however, other funding sources such as local taxes (e.g., property taxes) may be allocated for roadway maintenance (Pope pers. comm.). Additionally, projects that involve the generation of large volumes of truck traffic on local roadways may be required to contribute a fee that is applied to maintenance costs resulting from the additional traffic's damage to the roadway surface. For example, Kern County assesses a roadway maintenance fee, on a per-ton basis, to transporters hauling hazardous material to a storage site in the county (Pope pers. comm.).

Regulatory Setting

The primary transportation-related regulatory issues that are described below involve weight and load limitations for trucks. Biosolids are not considered a "hazardous waste" material and consequently many local jurisdictions do not have regulations or controls regarding the transport of biosolids.

State highway weight and load limitations are specified in the California Vehicle Code, Sections 35550 to 35559. The following general provisions apply to the project:

- g** The gross weight imposed upon the highway by the wheels on any axle of a vehicle shall not exceed 20,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle, and resting upon the roadway, shall not exceed 10,500 pounds.
- g** The maximum wheel load is the lesser of the following: a) the load limit established by the tire manufacturer, or b) a load of 620 pounds per lateral inch of tire width, as determined by the manufacturer's rated tire width.

For vehicles with trailers or semi-trailer, the following provision applies:

- g** The gross weight imposed upon the highway by the wheels on any one axle of a vehicle shall not exceed 18,000 pounds and the gross weight upon any one wheel,

or wheels, supporting one end of an axle and resting upon the roadway, shall not exceed 9,500 pounds, except that the gross weight imposed upon the highway by the wheels on any front steering axle of a motor vehicle shall not exceed 12,500 pounds, according to California Vehicle Code Sections 35550-35559.

These weight and load limitations for state highways would also apply to county roadways if no limitations were specified by the county.

Impacts and Mitigation Measures

Approach and Methods

Traffic impacts associated with implementation of the GO have been evaluated at a program level of detail using available information from existing biosolids application operations. Assumptions regarding the types of transport used and the distances traveled were used to assess the overall significance of project impacts.

Project trip generation is based on an estimate of the number of trucks that would result from a typical daily application of biosolids at a given site. Typically, heavy trucks, with an 80,000-pound weight limit, are used to transport biosolids. With each truck capable of hauling about 25 tons of biosolids, it is estimated that an average per-acre application would generate two round truck trips (Harrison pers. comm.). The total area (number of acres) treated with biosolids on a daily basis at a given site will vary with the technical capabilities of the applicator. Some of the larger operations in the Central Valley have the ability to apply between 1,500 and 2,000 tons per day (Skinner pers. comm.); however, most applicators apply between 40 and 60 acres on a given day (Price pers. comm.). Assuming that biosolids can be applied to an average of 40-60 acres on any given day, it is estimated that an average of 80-120 average daily truck trips would be generated on a given roadway for a short period.

Thresholds of Significance

According to State CEQA Guidelines and professional judgment, a project is considered to have a significant impact on traffic if it would:

- g** cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the roadway system,
- g** substantially increase the traffic delay experienced by drivers,
- g** result in substantial deterioration of the roadway surface, or
- g** expose people to roadway safety hazards.

Additionally, the following screening criterion is recommended by the Institute of Transportation Engineers (1989) for assessing the effects of development projects that create permanent traffic increases:

- g** In lieu of other locally preferred thresholds, a traffic access/impact study should be conducted whenever a proposed development will generate 100 or more added (new) peak direction trips to or from the site during the adjacent roadway's peak hours or the development's peak hours.

For construction projects that create temporary traffic increases, this criterion is considered conservative. However, this criterion is intended to assess the effect of a traffic mix consisting primarily of automobiles and lightweight trucks. To account for the large percentage of heavy trucks associated with the proposed action, the threshold level would be reduced to 50 new peak-direction trips. Therefore, project-related traffic is considered significant if transporting biosolids to an application site would cause a substantial increase in traffic volumes, defined as the generation of 50 or more trips per hour.

Impacts of Agricultural Use

Impact: Potential Increase in Traffic Resulting from the Transport of Biosolids

Lands application projects permitted under the GO have the potential to generate an additional 80-120 or more average daily round trips on a given roadway. Project-related traffic would occur throughout the day and is not expected to exceed the threshold of 50 trips per hour. This impact is considered less than significant.

Mitigation: No mitigation is required.

Impact: Deterioration of Roadway Surfaces

Land application projects permitted under the GO have the potential to result in an additional 80-120 or more daily project-related truck trips on a given roadway. The increase in traffic generated in the area of a land-application site would be short term because the increased traffic would occur only when the biosolids are being delivered and applied. As described above, the number of average daily truck trips would not change significantly on existing state or local roadways (which are maintained and will continue to be maintained by Caltrans or local jurisdictions). Because the number of average daily truck trips will not change significantly on the roadway system, no additional maintenance requirements are anticipated for state or local roadways; therefore, this impact is considered less than significant.

Impact: Potential for Roadway Safety Hazards Resulting from Accidental Spills

The accidental spill of biosolids along project-related access roads could create potential safety hazards and traffic delays for other motorists. However, because under the GO trucks transporting biosolids are required to be leakproof and covered, the potential for accidental spill of biosolids is very low (it would occur only if there was a traffic accident). Additionally, a Spill Prevention Plan must be submitted with the NOI and each truck driver is required to know how to carry out the emergency measures described in the Spill Prevention Plan (therefore reducing roadway hazards if an accidental spill were to occur). Because of the low probability of accidental spills during the transport of biosolids, this impact is considered less than significant.

Mitigation. No mitigation is required.

Impacts of Other Activities

Horticultural Use

The use of biosolids for horticultural purposes would generally result in impacts on traffic similar to those described above under "Agricultural Use" because, although existing traffic conditions vary in the areas where horticultural activities would occur under the GO (the existing traffic levels could be greater if the site is closer to urban centers), the same amount of traffic would be generated for the transportation of biosolids to the

horticultural sites (for large road medians, parks, and golf course projects) as described under “Agricultural Use”. Therefore, the significance threshold of 50 trips per hour would not be exceeded. Additionally, the delivery of biosolids to large nursery operations would not result in exceedance of the significance thresholds for project-related traffic.

Silvicultural Use

The use of biosolids for silvicultural purposes would result in traffic impacts similar to those described above under “Agricultural Use”. Existing traffic conditions in silvicultural areas would be similar to conditions where agricultural land application would occur, and the same amount of traffic would be generated for the transportation of biosolids to the silvicultural sites (commercial tree farms) as described under “Agricultural Use”.

Land Reclamation

The use of biosolids for land reclamation would result in impacts on traffic similar to those described above under “Agricultural Use” because existing traffic conditions near of reclamation sites or soil borrow areas are expected to be similar to those for agricultural areas. Additionally, the same amount of traffic would be generated for the delivery of biosolids to a land reclamation site as to an agricultural site; therefore, the significance threshold of 50 trips per hour would likely not be exceeded.